



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,124	05/31/2006	Philippe Tardieu	50304/126001	2477
21559	7590	12/05/2007	EXAMINER	
CLARK & ELBING LLP 101 FEDERAL STREET BOSTON, MA 02110			BASHAW, HEIDI M	
		ART UNIT	PAPER NUMBER	
		3732		
		NOTIFICATION DATE	DELIVERY MODE	
		12/05/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentadministrator@clarkelbing.com

<b>Office Action Summary</b>	Application No. 10/596,124	Applicant(s) TARDIEU, PHILIPPE
	Examiner Heidi M. Bashaw	Art Unit 3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 31 May 2006.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 30-51 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 30-51 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 31 May 2006 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a))

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/19/2006.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5)  Notice of Informal Patent Application

6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the a flat to flat connection, a separate anchorage part and abutment must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

***Claim Objections***

3. Claim 37 is objected to because of the following informalities: in line 1 of the claim it is believed "is integral part" is in error for -- is an integral part --. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 44-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 44 and 47 recites the limitation "the anchorage part" in lines 5 and 3 respectively. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 48 is rejected under 35 U.S.C. 102(b) as being anticipated by Daftary 5,213,502.

8. Re claim 48, Daftary discloses an impression coping 100 comprising at its proximal end a flat surface comprising an anchorage part having a flat surface as illustrated in fig. 7.

9. Claim 49 is rejected under 35 U.S.C. 102(b) as being anticipated by Jörnéus et al. 5,259,759 (Jörnéus).

10. Re claim 49 Jörnéus discloses a burn-out cylinder comprising a flat surfaced proximal end as illustrated in fig. 1.

#### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 30-32, 35-39 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al. 5,685,714 (Beaty) in view of Forsmalm et al. 5,584,694 (Forsmalm).

13. Re claim 30, Beaty teaches a prosthesis 10 comprising an anchorage part and a retaining screw wherein the anchorage part of the prosthesis comprises a hole for the retaining screw characterized in that the diameter of the neck of the retaining screw is smaller than the diameter of the hole in the anchorage part of the prosthesis as illustrated in fig. 4.

14. Beaty does not teach the interface of the implant assembly with the anchorage part of the prosthesis comprises a flat to flat connection so as to allow compensation for lateral misalignments.
15. Forsmalm teaches a flat to flat connection (col. 2, ll. 21-22) as illustrated in fig. 2a.
16. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm in order to fit a prosthesis in the mouth cavity even if there is an error in relation to the implant in the mouth as taught by Forsmalm (col. 4, ll. 19-22).
17. Re claim 31, Beaty does not teach wherein the compensation for lateral misalignments between the anchorage part of the prosthesis and the implant is ensured by way of lateral movements of the prosthesis on the implant of about 0.4 to about 1.4 mm.
18. Forsmalm teaches wherein the compensation for lateral misalignments between the anchorage part and the implant is ensured by way of lateral movements of the prosthesis on the implant (col. 4, ll. 19-24).
19. Beaty in view of Forsmalm does not teach where the lateral movements of the prosthesis on the implant are about 0.4 to about 1.4 mm. However, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A).

20. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm in order to fit a prosthesis in the mouth cavity even if there is an error in relation to the implant in the mouth as taught by Forsmalm (col. 4, ll. 19-22).

21. Re claim 32, Beaty teaches the diameter of the neck of the retaining screw is smaller with respect to the diameter of the hole in the anchorage part of the prosthesis as illustrated in fig.4.

22. Beaty in view of Forsmalm does not teach wherein the diameter of the neck of the retaining screw is about 0.4 to 1.2 mm smaller with respect to the diameter of the hole in the anchorage part of the prosthesis. However, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation” (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A).

23. Re claim 35, Beaty teaches the interface of the implant assembly with the anchorage part of the prosthesis as illustrated in fig. 4.

24. Beaty does not specifically teach the interlocking features allowing compensation for misalignments between the anchorage part of the prosthesis and the implant assembly.

25. Forsmalm teaches the interlocking features allowing compensation for misalignments between the anchorage part of the prosthesis and the implant assembly.

26. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm in order to fit a prosthesis in the

mouth cavity even if there is an error in relation to the implant in the mouth as taught by Forsmalm (col. 4, ll. 19-22).

27. Re claim 36, Beaty does not teach wherein the anchorage part is a separate cylindrical component that can be incorporated into a prosthesis, however, it would have been obvious to one having ordinary skill in the art at the time of the invention to make the anchorage part separate for the prosthesis since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art (*In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) MPEP 2144.04 V C).

28. Re claim 37, Beaty teaches wherein the anchorage part is an integral part of the prosthesis as illustrated in fig. 4.

29. Re claim 38, Beaty teaches the implant comprising a fixture head wherein the implant is a single structure.

30. Beaty does not teach the flat to flat connection is between the proximal surface of the fixture head of the implant and of the proximal surface of the anchorage part of the prostheses.

31. Forsmalm teaches the flat to flat connection is between the proximal surface of the fixture head of the implant and of the proximal surface of the anchorage part as illustrated in fig. 2a.

32. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm in order to fit a prosthesis in the mouth cavity even if there is an error in relation to the implant in the mouth as taught by Forsmalm (col. 4, ll. 19-22).

33. Re claim 39, Beaty teaches the implant assembly comprises an abutment and the flat to flat connection is between the abutment and the anchorage part of the prosthesis as illustrated in fig. 4.

34. Re claim 41, Beaty teaches the implant comprising a fixture head wherein the fixture head of the implant at the interface of the implant with the prosthesis having a flat surface, further comprising in the flat surface one or more dedicated features as illustrated in fig. 4.

35. Re claim 42, Beaty does not teach the combination further comprising an impression coping which comprises an anchorage part with a proximal surface characterized in that the proximal surface is flat.

36. Forsmalm teaches the combination further comprising an impression coping 1 which comprises an anchorage part with a proximal surface characterized in that the proximal surface is flat as illustrated in fig. 2a.

37. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm in order to increase the precision of impression taking and production of dental prostheses as taught by Forsmalm (col. 1, II. 8-10).

38. Claims 33-34 rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al. 5,685,714 (Beaty) in view of Forsmalm et al. 5,584,694 (Forsmalm) as applied to claim 30 above, and further in view of Kumar et al 6,447,295.

39. Re claim 33, Beaty in view of Forsmalm does not teach the combination wherein the diameter of the neck of the retaining screw is smaller than its threaded shaft.

40. Kumar teaches the diameter of the neck of the retaining screw 14 is smaller than its threaded shaft as illustrated in fig. 2.

41. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm further in view of Kumar in order to fasten the prosthesis to the implant as taught by Kumar (col. 7, ll. 34-36).

42. Re claim 33, Beaty in view of Forsmalm does not teach that there is no tolerance between the threaded shaft of the retaining screw and the hole in the anchorage part of the prosthesis.

43. Kumar teaches that there is no tolerance between the threaded shaft of the retaining screw and the hole in the anchorage part of the prosthesis as illustrated in fig. 2.

44. Re claim 33, Beaty in view of Forsmalm does not teach that there is no tolerance between the threaded shaft of the retaining screw and the hole in the anchorage part of the prosthesis.

45. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm further in view of Kumar in order to fasten the prosthesis to the implant as taught by Kumar (col. 7, ll. 34-36).

46. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al. 5,685,714 (Beaty) in view of Forsmalm et al. 5,584,694 (Forsmalm) as applied to claim 30 above, and further in view of Gahlert 2005/0106534.

47. Re claim 40, Beaty in view of Forsmalm does not teach the combination wherein the implant has an external surface comprising a distal part which is treated in interface

with bone and a proximal part which is untreated, characterized in that the proximal part has a length of between 2 and 6 mm.

48. Gahlert teaches the implant has an external surface comprising a distal part which is treated in interface with bone and a proximal part which is untreated (par. 15).

49. Beaty in view of Forsmalm in view of Gahlert does not teach the proximal part has a length of between 2 and 6 mm. However, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation” (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A). The applicant also discloses on page 13, line 31 of the specification that the size and length of the implant does not matter.

50. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Beaty in view of Forsmalm further in view of Gahlert in order to facilitate ossification as taught by Gahlert (par. 15).

51. Claim 43 rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al. 5,685,714 (Beaty) in view of Forsmalm et al. 5,584,694 (Forsmalm) as applied to claim 30 above, and further in view of Beaty et al. 5,674,071 (Beaty '071).

52. Re claim 43, Beaty in view of Forsmalm does not teach the combination further comprising an implant replica characterized in that the implant replica comprises a proximal end of which the proximal surface is flat.

53. Beaty '071 teaches an implant replica characterized in that the implant replica comprises a proximal end of which the proximal surface is flat as illustrated in fig. 7.

54. It would have been obvious to one having ordinary skill in the art at the time of invention to modify Beaty in view of Forsmalm further in view of Beaty '071 in order to create a prosthesis that will fit on the implant.

55. Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al 6,447,295 (Kumar) in view of Forsmalm et al 5,584,694 (Forsmalm).

56. Re claim 44, Kumar teaches a retaining screw 14 for fixing a prosthesis to a dental implant assembly having at their interface a tolerance interlock, the retaining screw being characterized in that the diameter of its neck is smaller than its threaded shaft and the diameter of the neck is smaller with respect to the diameter of the hole in the anchorage part of the prosthesis.

57. Kumar does not specifically teach compensation for lateral misalignments between the center of the anchorage part of the prosthesis and the center of the implant.

58. Forsmalm teaches wherein the compensation for lateral misalignments between the anchorage part of the prosthesis and the implant is ensured by way of lateral movements of the prosthesis of the implant (col. 4, ll. 19-24).

59. Kumar in view of Forsmalm does not specifically teach the diameter of the neck is about 0.4 to 1.2 mm smaller with respect to the diameter of the hole in the anchorage part, however, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) MPEP 2144.05 II A).

60. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kumar in view of Forsmalm in order to fit a prosthesis in the mouth cavity even if there is an error in relation to the implant in the mouth as taught by Forsmalm (col. 4, ll. 19-22).

61. Re claim 45, Kumar teaches the retaining screw further characterized in that it has a cylindrical head with a conical opening inwards as illustrated in fig. 2.

62. Re claim 46, Kumar teaches the retaining screw characterized in that the threaded shaft fits into a threaded hole in the implant as illustrated in fig. 6.

63. Re claim 47, Kumar teaches the retaining screw characterized in that the diameter of the threaded shaft of the retaining screw is equal to the diameter of the hole in the anchorage part of the prosthesis as illustrated in fig. 6.

64. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jörnéus et al. 5,259,759 (Jörnéus) as applied to claim 49 above, and further in view of Singer 5,813,858.

65. Re claim 50, Jörnéus does not teach the burn-out cylinder further comprises a tapered collar.

66. Singer teaches the burn-out cylinder further comprises a tapered collar 184 as illustrated in fig. 16.

67. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Jörnéus in view of Singer in order to ensure that the prosthesis is created with the same anatomical dimension that the particular tooth exhibited as taught by Singer (col. 16, ll. 6-9).

68. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jörnéus et al. 5,259,759 (Jörnéus).

69. Re claim 51, Jörnéus teaches the burn-out cylinder further comprising an internal shaft comprising two cylindrical parts.

70. Jörnéus does not teach wherein the diameter of the proximal of the two parts is smaller than that of the distal part. However, the court held that the configuration of the claimed cylinder was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed cylinder was significant (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04 IV B).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi M. Bashaw whose telephone number is 571-270-3081. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*/John J Wilson/  
Primary Examiner  
Art Unit 3732*

*Unci Basmaw  
HMB  
11/29/2007*